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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,544	09/12/2003	Arto Palin	4208-4144 (Nokia NC28897)	6418
27123	7590	08/30/2006	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			PEREZ, ANGELICA	
			ART UNIT	PAPER NUMBER
			2618	
DATE MAILED: 08/30/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/660,544

Applicant(s)

PALIN ET AL.

Examiner

Perez M. Angelica

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/10/05, 9/19/05, 10/31/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-2, 5 10, 28-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Auckland (Auckland et al.; US Pub. No.: 2003/0,078,037 A1).

3. Regarding claims 1, 28 and 29, Auckland teaches of a method, system and computer program for establishing a wireless communications link, the method comprising (paragraphs 2 and 85, 153; communication link for communication): (a) determining through a first short-range communications link of a first type whether a remote device is capable of supporting a short-range communications link of a second type (paragraph 147, where the first device can be communication in a 3.5 GHz frequency characteristic of Bluetooth and the second device can be a UWB); and (b)

exchanging information with the remote device across the first communications link to establish a second short-range communications link (paragraph 147 and 188; where protocol exchange communications take place), where the second short-range communications link is of the second type (paragraphs 147 and 188).

Regarding claim 2, Auckland teaches all the limitations of claim 1. Auckland further teaches of directing the remote device to start communication across the second short-range wireless communication link (paragraph 147; e.g., "a base station may instruct the radio to move to a different frequency band...").

Regarding claim 5, Auckland teaches all the limitations of claim 1. Auckland further teaches of communicating with the remote device across the second short-range communications link (paragraph 160; where the networks may include Bluetooth, unlicensed devices; thus, the second link can be short-range link.

Regarding claim 10, Auckland teaches all the limitations of claim 1. Auckland further teaches of establishing the first short-range communications link with the remote device (where the limitation is already present in claim 1, where both first and second links are short-range links).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Auckland in view of Specification of the Bluetooth System, Feb. 22, 2001).

Regarding claim 3, Auckland teaches all the limitations of claim 2. Auckland further teaches where the first short-range communications link is a Bluetooth link (paragraph 161; e.g., "Bluetooth") and the second short-range link communications link is an ultra wideband (paragraph 188; e.g., "wide band communication channel" for wide band communication links).

Auckland does not specifically teach of sending a Bluetooth link manager protocol (LMP) message to the remote device, the LMP message adapted to direct the remote device to begin accepting transmissions across the UWB link.

In related art concerning the specifications of Bluetooth systems, the Bluetooth specifications show of sending a Bluetooth link manager protocol (LMP) message to the remote device, the LMP message adapted to direct the remote device to begin accepting transmissions across the UWB link (page 207 and 232, subheading 3.11 and 4, where the connection establishment accepts establishment of communication. Also, the connection can be done from a Bluetooth device to an UWB as long as the Bluetooth initiates the request).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Auckland's Bluetooth request for connection with a UWB in order to provide higher rate communications among short-range devices.

Regarding claim 4, Auckland teaches all the limitations of claim 3. The Bluetooth specifications further teach where the LMP message includes one or more TWB parameters (where in order to start the connection, it is required that at least data rate requirements is specified).

Regarding claim 6, Auckland teaches all the limitations of claim 1. Auckland further teaches where the first communications link is a Bluetooth link (where claim 6 limitation repeats. It has been already addressed in claim 3).

Regarding claim 7, Auckland teaches all the limitations of claim 1. Auckland further teaches where the second communications link is an ultra wideband (UWB) link (where claim 7 limitation repeats. It has been already addressed in claim 3).

Regarding claim 8, Auckland teaches all the limitations of claim 1. Auckland further teaches where the first communications link is a Bluetooth link and the second communications link is an ultra wideband (UWB) link (where claim 8 limitations repeat. They have been already addressed in claim 3).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Auckland in view of Moeglein (Moeglein et al.; US Pub. No.: 2005/0,037,775 A1).

Regarding claim 9, Auckland teaches all the limitations of claim 8. Auckland further teaches where the UWB link employs a slot timing structure of the Bluetooth link.

Auckland does not specifically teach where the UWB link employs a slot timing structure of the Bluetooth link.

In related art concerning a method and apparatus for wireless network hybrid positioning, Moeglein teaches where the UWB link employs a slot timing structure of the

Bluetooth link (paragraph 76, where the timing slots, frames can be adapted to/from other air interfaces).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Auckland's multi-air interfaces with Moeglein timing frame exchange in order to provide dynamic systems capable of handling different air interfaces.

6. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Auckland in view of Moeglein (Moeglein et al.; US Pub. No.: 2005/0,037,775 A1) and further in view of Specification of the Bluetooth System.

Regarding claim 11, Auckland in view of Moeglein teaches all the limitations of claim 10.

Auckland in view of Moeglein teaches all the limitations of claim 10.

In related art concerning the specifications of Bluetooth systems, the Bluetooth specifications show where the first communications link is a Bluetooth link, the establishing step comprising: performing a Bluetooth paging process with the remote device (page 232, section 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Auckland in view of Moeglein short-range communication link with the paging used in Bluetooth in order to establish a connection link as established in the Bluetooth specifications.

Regarding claim 12, Auckland teaches all the limitations of claim 1.

Auckland does not specifically teaches where step (b) comprises: (1) sending a request to the remote device across the first communications link, the request inquiring whether the remote device desires to establish the second communications link; and (2) receiving an acknowledgement from the remote device through the first communications link, the acknowledgement indicating that the remote device desires to establish the second communications link.

In related art concerning the specifications of Bluetooth systems, the Bluetooth specifications show where step (b) comprises: (1) sending a request to the remote device across the first communications link, the request inquiring whether the remote device desires to establish the second communications link; and (2) receiving an acknowledgement from the remote device through the first communications link, the acknowledgement indicating that the remote device desires to establish the second communications link (pages 232-233; where the acceptance /refusal to accept the connection is confirmed through an acknowledgment).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Auckland short-range communication link with an acknowledgment that confirms the acceptance of communication as taught by the Bluetooth specifications.

Regarding claim 13, Auckland teaches all the limitations of claim 12. The Bluetooth specifications further teach where step (1) comprising: sending a Bluetooth link manager protocol (LMP) message to the remote device, the LMP message adapted to inquire whether the remote device desires to establish the UWB link (page 207 and

232-233, subheading 3.11 and 4, where a request for communication is issued by an initiating device. Also, the connection can be done from a Bluetooth device to an UWB as long as the Bluetooth initiates the request).

7. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Auckland in view of Kim (Kim et al.; US Pub. No.: 2003/0,108,010 A1).

Regarding claim 14, Auckland teaches all the limitations of claim 1. Auckland does not teach where step (b) comprising: sending a Bluetooth link manager protocol (LMP) message to the remote device requesting packet type table including information identifying one or more supported links and packet types.

In related art concerning a wireless communication apparatus and a method using the same, Kim teaches of sending a Bluetooth link manager protocol (LMP) message to the remote device requesting packet type table including information identifying one or more supported links and packet types (paragraph 11, table 1; where the LMP is in charge of the messaging).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Auckland's short-range communications method/system with Kim's well know fact about data transmission procedures utilized in Bluetooth in order to obtain different performance according to the packet type.

Regarding claim 15, Auckland in view of Kim teaches all the limitations of claim 14. Auckland further teaches where the second short-range communications link is an ultra wideband (UWB) link (where claim 7 limitation repeats. It has been already addressed in claim 3).

Regarding claim 16, Auckland in view of Kim teaches all the limitations of claim 14. Auckland further teaches where the second short-range communications link is a high rate (HR) link (where Auckland teaches of UWB links and UWB links are inherently high rate links).

8. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Auckland in view of Ito (US 2002/0,151,276 A1).

Regarding claim 17, Auckland teaches of a wireless communications device (paragraph 2), comprising: a first segment adapted to exchange information with a remote device across a first short-range wireless communications link of a first type (paragraph 160, figure 6, item 616 or figure 11, item 604; where segments can be interpreted in many ways. Also, the transmitter unit/antennas are adapted to communicate utilizing short-wave links), and a second segment adapted to exchange information with the remote device across the second communications link (figure 11, item 604; where the segments can be two antennas).

Auckland teaches does not specifically teach where of a host coupled to the first segment, the host adapted to set up a second short-range wireless communications link of a second type by causing the first segment to exchange information with the remote device across the first communications link, the information including one or more parameters of the second short-range communications link; and a second segment adapted to exchange information with the remote device across the second communications link.

In related art concerning a wireless communication device and method, Ito teaches of a host coupled to the first segment (figure 1, items 4A-4d; where host devices are coupled to item 3), the host adapted to set up a second short-range wireless communications link of a second type by causing the first segment to exchange information with the remote device across the first communications link (paragraph 28; where each host can communicate utilizing different ranges of frequency links).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Auckland's device with Ito's host devices in order to allow direct communication with external equipment, as taught by Ito.

Regarding claim 18, Auckland in view of Ito teaches all the limitations of claim 17. Auckland further teaches where the first communications link is a Bluetooth link (paragraph 161; e.g., "Bluetooth").

Regarding claim 19, Auckland in view of Ito teaches all the limitations of claim 17. Auckland further teaches where the second communications link is an ultra wideband (UWB) link (paragraph 188; e.g., "wide band communication channel" for wide band communication links).

Regarding claim 20, Auckland in view of Ito teaches all the limitations of claim 17. Auckland further teaches where the first communications link is a Bluetooth link (paragraph 161; e.g., "Bluetooth") and the second communications link is an ultra wideband (UWB) link (paragraph 188; e.g., "wide band communication channel" for wide band communication links).

9. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Auckland in view of Ito and further in view of Moeglein.

Regarding claim 21, Auckland in view of Ito teaches all the limitations of claim 8. Auckland further teaches where the UWB link employs a slot timing structure of the Bluetooth link.

Auckland in view of Ito does not specifically teach where the UWB link employs a slot timing structure of the Bluetooth link.

In related art concerning a method and apparatus for wireless network hybrid positioning, Moeglein teaches where the UWB link employs a slot timing structure of the Bluetooth link (paragraph 76, where the timing slots, frames can be adapted to/from other air interfaces).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Auckland in view of Ito multi-air interfaces with Moeglein slot timing structure in order to provide dynamic systems capable of handling different air interfaces.

10. Claims 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Auckland in view of Ito and further in view of the Specification (Specification of the Bluetooth System, Feb. 22, 2001).

Regarding claim 22, Auckland teaches all the limitations of claim 20.

Auckland does not specifically teach where the first segment includes a link manager adapted to exchange one or more Bluetooth link manager protocol (LMP)

message with the remote device, the LMP message adapted to direct the remote device to begin accepting transmissions across the UWB link.

In related art concerning the specifications of Bluetooth systems, the Bluetooth specifications teach where the first segment includes a link manager adapted to exchange one or more Bluetooth link manager protocol (LMP) message with the remote device, the LMP message adapted to direct the remote device to begin accepting transmissions across the UWB link (page 207 and 232, subheading 3.11 and 4, where the connection establishment accepts establishment of communication. Also, the connection can be done from a Bluetooth device to an UWB as long as the Bluetooth initiates the request).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Auckland's Bluetooth request for connection with a UWB in order to provide higher rate communications among short-range devices.

Regarding claim 23, Auckland in view of Ito and further in view of Bluetooth specifications teaches

all the limitations of claim 22. Bluetooth specifications further teach of sending a Bluetooth link manager protocol (LMP) message to the remote device, the LMP message adapted to direct the remote device to begin accepting transmissions across the UWB link (page 207 and 232, subheading 3.11 and 4, where the connection establishment accepts establishment of communication. Also, the connection can be done from a Bluetooth device to an UWB as long as the Bluetooth initiates the request).

Regarding claim 24, Auckland in view of Ito and further in view of Bluetooth specifications teaches

all the limitations of claim 23. Bluetooth specifications further teach where the LMP message includes one or more UWB parameters (where in order to start the connection, it is required that at least data rate requirements is specified).

Regarding claim 25, Auckland in view of Ito and further in view of Bluetooth specifications teaches

all the limitations of claim 23. Bluetooth specifications further teach where the one or more LMP messages includes an LMP message adapted to inquire whether the remote device desires to establish the UWB link (page 207 and 232-233, subheading 3.11 and 4, where a request for communication is issued by an initiating device. Also, the connection can be done from a Bluetooth device to an UWB as long as the Bluetooth initiates the request).

Regarding claim 26, Auckland in view of Ito and further in view of Bluetooth specifications teaches

all the limitations of claim 22. Bluetooth specifications further teach where the one or more LMP messages include an LMP message adapted to determine whether the remote device is capable of supporting the UWB link.

11. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Auckland in view of Ito, further in view of Bluetooth specifications further in view of Kim.

Regarding claim 27, Auckland in view of Ito, further in view of Bluetooth specifications teaches all the limitations of claim 26. Auckland does not teach where

one of the link manager protocol (LMP) messages includes a packet type table request message.

In related art concerning a wireless communication apparatus and a method using the same, Kim teaches where one of the link manager protocol (LMP) messages includes a packet type table request message (paragraph 11, table 1; where the LMP is in charge of the messaging).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Auckland's short-range communications method/system with Kim's well know fact about data transmission procedures utilized in Bluetooth in order to obtain different performance according to the packet type.

Regarding claim 26, Auckland in view of Ito, further in view of Bluetooth specifications teaches all the limitations of claim 22. Auckland further teaches where the one or more LMP messages includes a packet type table request message determining through a first short-range communications link of a first type whether a remote device is capable of supporting a short-range communications link of a second type (paragraph 147, where the first device can be communication in a 3.5 GHz frequency characteristic of Bluetooth and the second device can be a UWB).

Conclusion

12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Angelica Perez whose telephone number is 571-272-7885. The examiner can normally be reached on 6:00 a.m. - 2:00 p.m., Monday - Friday.

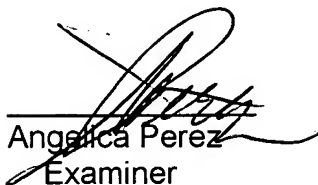
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either the PAIR or Public PAIR. Status information for unpublished applications is available through the Private PAIR only. For more information about the pair system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Information regarding Patent Application Information Retrieval (PAIR) system can be found at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.

Quochien B. Vuong 6/26/06

QUOCHIEN B. VUONG
PRIMARY EXAMINER


Angelica Perez
Examiner

June 23, 2005

Art Unit 2618